

SEQUENCE LISTING

<110> Jacobson, Joseph
 Schwartz, John
 Das Gupta, Ruchira

<120> Engineered Stimulus-Responsive Switches

<130> DNV-003

<150> US 60/242,546
 <151> 2000-10-23

<160> 20

<170> PatentIn version 3.0

<210> 1
 <211> 21
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Zinc finger consensus sequence

<220>
 <221> misc_feature
 <222> (2)..(3)
 <223> wherein Xaa at positions 2, 3 can be any amino acid

<220>
 <221> misc_feature
 <222> (5)..(7)
 <223> wherein Xaa at positions 5, 6, 7 can be any amino acid

<220>
 <221> misc_feature
 <222> (9)..(13)
 <223> wherein Xaa at positions 9, 10, 11, 12, 13 can be any amino acid

<220>
 <221> misc_feature
 <222> (15)..(16)
 <223> wherein Xaa at positions 15, 16 can be any amino acid

<220>
 <221> misc_feature
 <222> (18)..(20)
 <223> wherein Xaa at positions 18, 19, 20 can be any amino acid

<400> 1
 Cys Xaa Xaa Cys Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa
 1 5 10 15
 His Xaa Xaa Xaa His
 20

<210> 2
 <211> 22
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Zinc finger consensus sequence

 <220>
 <221> misc_feature
 <222> (2)..(4)
 <223> wherein Xaa at positions 2, 3, 4 can be any amino acid

 <220>
 <221> misc_feature
 <222> (6)..(8)
 <223> wherein Xaa at positions 6, 7, 8 can be any amino acid

 <220>
 <221> misc_feature
 <222> (10)..(14)
 <223> wherein Xaa at positions 10, 11, 12, 13, 14 can be any amino acid

 <220>
 <221> misc_feature
 <222> (16)..(17)
 <223> wherein Xaa at positions 16, 17 can be any amino acid

 <220>
 <221> misc_feature
 <222> (19)..(21)
 <223> wherein Xaa at positions 19, 20, 21 can be any amino acid

 <400> 2
 Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Leu Xaa
 1 5 10 15

 Xaa His Xaa Xaa Xaa His
 20

 <210> 3
 <211> 23
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Zinc finger consensus sequence

 <220>
 <221> misc_feature
 <222> (2)..(5)
 <223> wherein Xaa at positions 2, 3, 4, 5 can be any amino acid

 <220>
 <221> misc_feature

<222> (7)..(9)
 <223> wherein Xaa at positions 7, 8, 9 can be any amino acid

 <220>
 <221> misc_feature
 <222> (11)..(15)
 <223> wherein Xaa at positions 11, 12, 13, 14, 15 can be any amino acid

 <220>
 <221> misc_feature
 <222> (17)..(18)
 <223> wherein Xaa at positions 17, 18 can be any amino acid

 <220>
 <221> misc_feature
 <222> (20)..(22)
 <223> wherein Xaa at positions 20, 21, 22 can be any amino acid

 <400> 3
 Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Leu
 1 5 10 15

 Xaa Xaa His Xaa Xaa Xaa His
 20

 <210> 4
 <211> 21
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Zinc finger consensus sequence

 <220>
 <221> misc_feature
 <222> (2)..(3)
 <223> wherein Xaa at positions 2, 3 can be any amino acid

 <220>
 <221> misc_feature
 <222> (4)..(16)
 <223> wherein Xaa at positions 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 can be any amino acid

 <220>
 <221> misc_feature
 <223> wherein Xaa at positions 19, 20 can be any amino acid

 <400> 4
 Cys Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

 Xaa Cys Xaa Xaa Cys
 20

 <210> 5
 <211> 7

<212> PRT
<213> Artificial Sequence

<220>
<223> target sequence for protein kinase A

<400> 5
Leu Arg Arg Ala Ser Leu Gly
1 5

<210> 6
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> substrate for casein kinase II

<400> 6
Arg Arg Arg Glu Glu Glu Thr Glu Glu Glu
1 5 10

<210> 7
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> substrate sequence for v-Abl tyrosine kinase

<400> 7
Glu Ala Ile Tyr Ala Ala Pro Phe Ala Lys Lys Lys
1 5 10

<210> 8
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer for leucine zipper motif

<400> 8
atcgcgacaca tgaaacaact tgaagac

27

<210> 9
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer for leucine zipper motif

<400> 9
tcagcggttcg ccaactaatt tc

22

<210> 10
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for lambda repressor

<400> 10
 atgagcacaa aaaagaaacc attaac 26

<210> 11
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for lambda repressor

<400> 11
 gcttaccag cgctccgc 18

<210> 12
 <211> 504
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> cI-bZIP repressor variant

<400> 12
 atgagcacaa aaaagaaacc attaacacaa gagcagcttg aggacgcacg tcgccttaaa 60
 gcaatattatg aaaaaaagaa aaatgaactt ggcttatccc aggaatctgt cgcagacaag 120
 atgggggatgg ggcagtcagg cgcttggtgct ttatttaatg gcatcaatgc attaaatgct 180
 tataacgccg cattgcttac aaaaattctc aaagtttagcg ttgaagaatt tagcccttca 240
 atcgccagag aaatctacga gatgtatgaa gcggttagta tgcagccgctc acttagaagt 300
 gagtatgagt accctgtttt ttctcatggt caggcagga tgttctcacc taagcttaga 360
 acctttacca aaggtgatgc ggagcgctgg gtaagcatcg cgcacatgaa acaacttgaa 420
 gacaagggttg aagaattgct ttcgaaaaat tatcacttgg aaaatgaggt tgccagatta 480
 aagaaattag ttggcgaacg ctga 504

<210> 13
 <211> 35
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for coding sequence of a temperature sensitive form of
 the lambda repressor containing an AvaI sit

<400> 13
 ttacaacgcc cgggtcagcc aaacgtctct tcagg 35

<210> 14
 <211> 71
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for the coding sequence of a temperature sensitive form
 of lambda repressor

<400> 14
 atgggcattt tctcgagtca gccgggcat accccgcac cgccggccag cacaaaaaag 60
 aaaccattaa c 71

<210> 15
 <211> 784
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> TBD-cI repressor variant

<400> 15
 atgggcattt tctcgagtca gccgggcat accccgcac cattaacaca agagcagcac 60
 aaaaaagaaa ccattaacac aagagcagct tgaggacgca cgtcgctta aagcaattta 120
 tgaaaaaag aaaaatgaac ttggcttct ccaggaatct gtcgcagaca agatggggat 180
 ggggcagtca ggcgttggtg ctttatttaa tggcatcaat gcattaaatg cttataacgc 240
 cgcattgctt acaaaaattc tcaaagttag cgttgaagaa tttagccctt caatcgccag 300
 agaaatctac gagatgtatg aagcggttag tatgcagccg tcaactagaa gtgagtatga 360
 gtacctgtt catcaccatc accatcactt ttctcatgtt caggcaggga tgttctcacc 420
 taagcttaga acctttacca aaggtgatgc ggagagatgg gtaagcaca ccaaaaaagc 480
 cagtgattct gcattctggc ttgaggttga aggtaattcc atgaccgcac caacaggctc 540
 caagccaagc tttcctgacg gaatgttaat tctcgttgac cctgagcagg ctgttgagcc 600
 aggtgatttc tgcataagca gacttggggg tgatgagttt accttcaaga aactgatcag 660
 ggatagcggc caggtgtttt tacaaccact aaaccacag taccatga tcccatgcaa 720
 tgagagttgt tccgttgtgg ggaaagttat cgctagtcag tggcctgaag agacgtttgg 780
 ctga 784

<210> 16
 <211> 61
 <212> DNA
 <213> Artificial Sequence

<220>

<223> primer for coding sequence of a temperature sensitive form of
 lambda repressor

<400> 16
 atgggcattt tctcgagtca gccggggccat accccgcatc cattaacaca agagcagctt 60
 g 61

<210> 17
 <211> 545
 <212> DNA
 <213> Artificial Sequence

<220>

<223> TBD-cI-bZIP repressor variant

<400> 17
 atgggcattt tctcgagtca gccggggccat accccgcatc cattaacaca agagcagcac 60
 aaaaaagaaa ccattaacag gacgcacgtc gccttaaagc aatttatgaa aaaaagaaaa 120
 atgaacttgg cttatcccag gaatctgtcg cagacaagat ggggatgggg cagtcaggcg 180
 ttggtgcttt atttaatggc atcaatgcat taaatgctta taacgccgca ttgcttacia 240
 aaatttctcaa agtttagcgtt gaagaattta gcccttcaat cgccagagaa atctacgaga 300
 tgtatgaagc ggtagtatg cagccgtcac ttagaagtga gtatgagtac cctgtttttt 360
 ctcatgttca ggcagggatg ttctcaccta agcttagaac ctttaccaa ggtgatgcgg 420
 agcgtctgggt aagcatcgcg cacatgaaac aacttgaaga caagggtgaa gaattgcttt 480
 cgaaaaatta tcacttgga aatgagggtt ccagattaaa gaaattagtt ggcaacgct 540
 ga 542

<210> 18
 <211> 525
 <212> DNA
 <213> Artificial Sequence

<220>

<223> TBP-cI-bZIP repressor variant with a deletion

<400> 18
 atgggcattt tctcgagtca gccggggccat accccgcatc cattaacaca agagcagctt 60
 gaggacgcac gtcgccttaa agcaatttat gaaaaaaga aaaatgaact tggcttatcc 120
 caggaatctg tcgcagacaa gatggggatg gggcagtcag gcgttggtgc tttatttaat 180

ggcatcaatg cattaatgc ttataacgcc gcattgctta caaaaattct caaagttagc 240
 gttgaagaat ttagcccttc aatcgccaga gaaatctacg agatgtatga agcggttagt 300
 atgcagccgt cacttagaag tgagtatgag taccctgttt tttctcatgt tcaggcaggg 360
 atgttctcac ctaagcttag aacctttacc aaaggtgatg cggagcgctg ggtaagcatc 420
 gcgcacatga aacaacttga agacaagggt gaagaattgc tttcgaaaaa ttatcacttg 480
 gaaaatgagg ttgccagatt aaagaaatta gttggcgaac gctga 525

<210> 19
 <211> 52
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer containing sequence for a weak constitutive tetracycline
 resistance promoter

<400> 19
 gtttgacagc ttatcatcga atagctttaa tgcgctagct agacaagtac tc 52

<210> 20
 <211> 52
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer containing sequence for a weak constitutive tetracycline
 resistance promoter

<400> 20
 gagtacttgt ctagctagcg cattaagct attcgatgat aagctgtcaa ac 52